

**POLYMERIC PIGMENT DISPERSANT UTILIZED AS A
GRIND RESIN FOR PIGMENTS AND METHOD OF
PREPARING THE SAME**

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ABSTRACT

[0061] The present invention is directed to a polymeric pigment dispersant to be used as a grind resin to incorporate pigment into a pigment dispersion for a coating composition. The polymeric pigment dispersant is the reaction product of dipentaerythritol, hexahydrophthalic anhydride, glycidylneodecanoate, dimethylethanolamine, and polyphosphoric acid. The present invention is also directed to a method of preparing the polymeric pigment dispersant. In this method, the dipentaerythritol and the hexahydrophthalic anhydride are polymerized to form an intermediate compound. Next, an epoxy group of the glycidylneodecanoate reacts with the intermediate compound, and then the dimethylethanolamine salts the intermediate compound. Finally, the polyphosphoric acid is added to form the completed polymeric pigment dispersant. The polymeric pigment dispersant has improved stability in the pigment dispersion and is utilized for efficient wetting and grinding of the pigment in the pigment dispersion.

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